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# THE MEDITERRANEAN TOUR

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From May 10 to June 8 my wife and I led a botanical tour to the Mediterranean which included visits to Italy, Sicily, Sardinia, Corsica and the Côte d'Azur. At maximum strength our party consisted of 36 persons, many of them present or former students of the Arboretum School. The size of our group varied from time to time, since some members enrolled for the first three weeks and others for the final three; most of us stayed for the duration.

The first contingent left Philadelphia on Wednesday, May 10, and arrived the following morning in Rome. The balance of the day was at leisure, but since our hotel was on the centrally located Via Nazionale, many of us wandered from the Baths of Diocletian at one end to the Victor Emmanuel II monument at the other.

The following morning was devoted to seeing something of Rome's classical ruins: Trajan's Forum, the Roman Forum and, of course, the Colosseum. I recalled having read many years ago a delightful little book, by an author whose name I forget, on the "Wild Flowers of the Colosseum." This vast monument provides a multitude of nooks and crannies where we observed, among other things, capers, poppies, mignonette, bellflowers and several kinds of ferns. (Fig. 1) A longer visit would doubtless have resulted in a formidable list. The morning tour ended with a visit to the exquisite cloister of the Basilica of St. Paul.

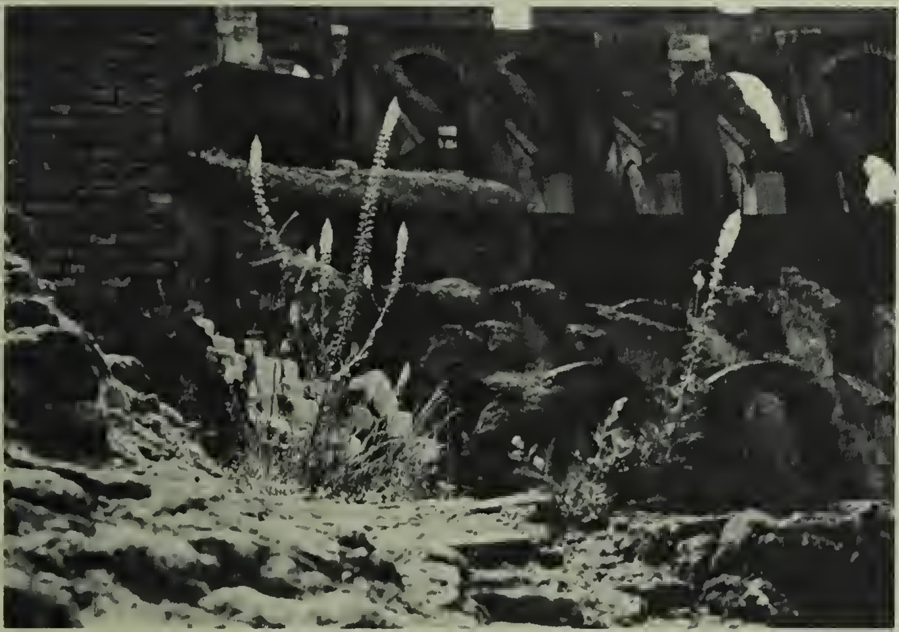

Fig. 1. Mignonette in the Colosseum at Rome

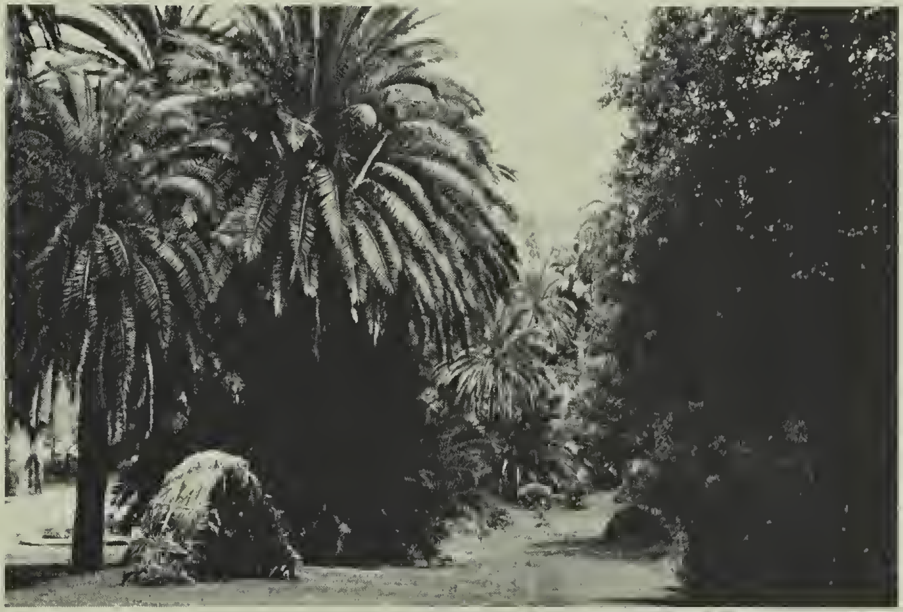

Fig. 2. View in the Botanic Garden in Rome

That afternoon we visited the sumptuous gardens of the Villa d'Este where the vegetation is lush and varied, and the artistry of fountains seem to achieve its fullest expression.

Between Rome and the Villa d'Este we passed extensive travertine quarries, an important source of that attractive stone which is so widely used in building, especially in interior ornamentation.

On the morning of Saturday, May 13, we went to see the Botanical Garden of the University of Rome. This fine old garden is situated on a slope, from the top of which may be had a superb view across the city. It is noted for its collection of conifers, palms, and succulents. Although Dr. Mario Catalano, the curator, was not available when we arrived, he joined us later and in the meantime had kindly arranged for two members of his staff to show us around. (Fig. 2)

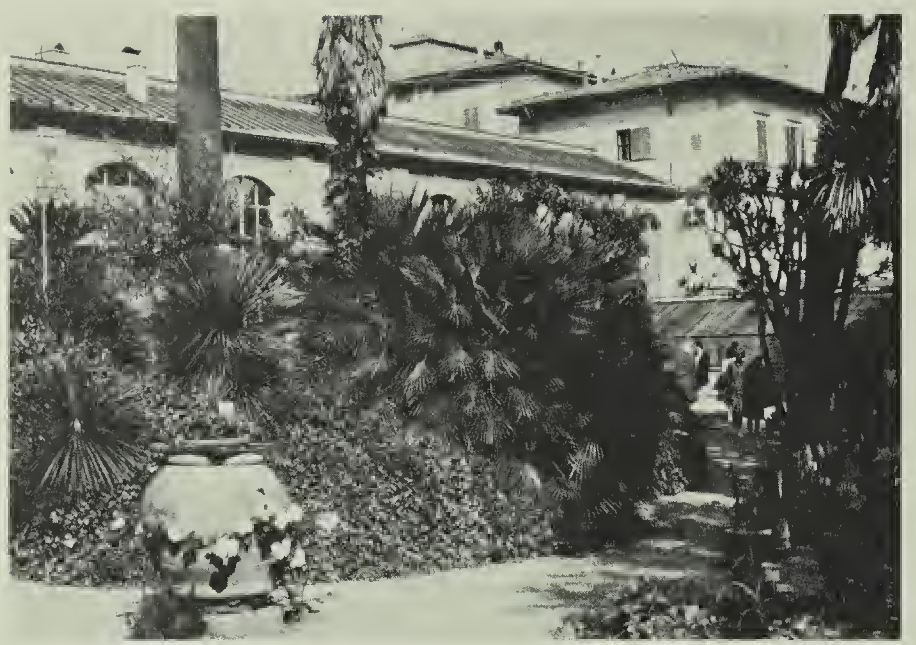

Fig. 3. View in the Botanic Garden in Florence

One of the first plants which engaged our attention was *Agathis robusta*. This is the Australian kauri, a member of the Araucariaceae which is native to the Mary River region of Queensland, Australia. This species should not be confused with *A. australis*, the New Zealand kauri, which is found only in the northern portion of North Island.

Another fascinating plant was a huge tree of *Ehretia acuminata*. The genus *Ehretia* is one of the few woody members of the Boraginaceae and most of us were familiar with *E. thyrsiflora* which is hardy, but only as a small tree, in the Philadelphia area.

Of considerable interest to us were two enormously tall trees of *Torreya*. One was *T. californica*, which has a somewhat limited distribution in the Sierra Nevadas; the other was *T. grandis*, a native of China, closely related to the more familiar *T. nucifera* of Japan.

We were pleased to see a fine specimen of the Phoenix tree, *Firmiana simplex*. This interesting member of the Sterculiaceae, which we had seen so widely used as a street tree in Taipei, has so far eluded all of our efforts to grow it at the arboretum. Another plant which was perfectly hardy here was *Cocculus laurifolius*, an evergreen shrub with attractive shiny leathery leaves. This species certainly bears little resemblance to our American moonseed (*Menispermum*), although both belong to the same family. We were shown an Oriental plane-tree (*Platanus orientalis*), reputed to be 1500 years old, and since we had seen specimens of a comparable size and age in Greece we were not disposed to question this estimate.

Fig. 4. The flower market in Florence

There were fine specimens of *Podocarpus nereifolia*, a wide-ranging species from southeastern Asia, and *P. Totara*, the totara of New Zealand, where it is considered a valuable timber tree.

The only two eastern American plants we saw were the wax myrtle (*Myrica cerifera*), a relative of the bayberry which is common along the Atlantic coast from southern New Jersey to Florida, and the bull bay (*Magnolia grandiflora*), which was just coming into flower.

That afternoon we went first to see the Rosaledo on Avantine Hill. This is a fine collection of roses, beautifully grown and well labeled. We then continued our sightseeing, paying our respects to Vatican City, St. Peter's, and the Pantheon.

Fig. 5. View in the garden of the Hotel San Domenico at Taormina

The following day, May 14, we departed from Rome by chartered motorcoach and traveled north through Assisi to Perugia, where we were to spend the night. For several miles we followed the valley of the Tiber River through agricultural land. A conspicuous roadside planting was *Pyracantha coccinea*, here in full flower, and a ubiquitous small tree was our own black locust (*Robinia Pseudoacacia*), which has become so widely naturalized throughout practically all of southern Europe. As might be expected, the dominant feature of the landscape was the prevalence of vast fields of scarlet poppies.

As we crossed the mountains near Spoleto the character of the vegetation changed and we began to see more of the native flora. We stopped occasionally to collect and identify the roadside plants and soon became familiar with *Allium triquetrum* (a white-flowered garlic), *Tordylium apulum* (a delicate umbellifer—also white-flowered) and a host of mints, mallows, borages and composites.

The ride from Perugia to Florence the following morning took us around the shores of Lake Trasimeno and

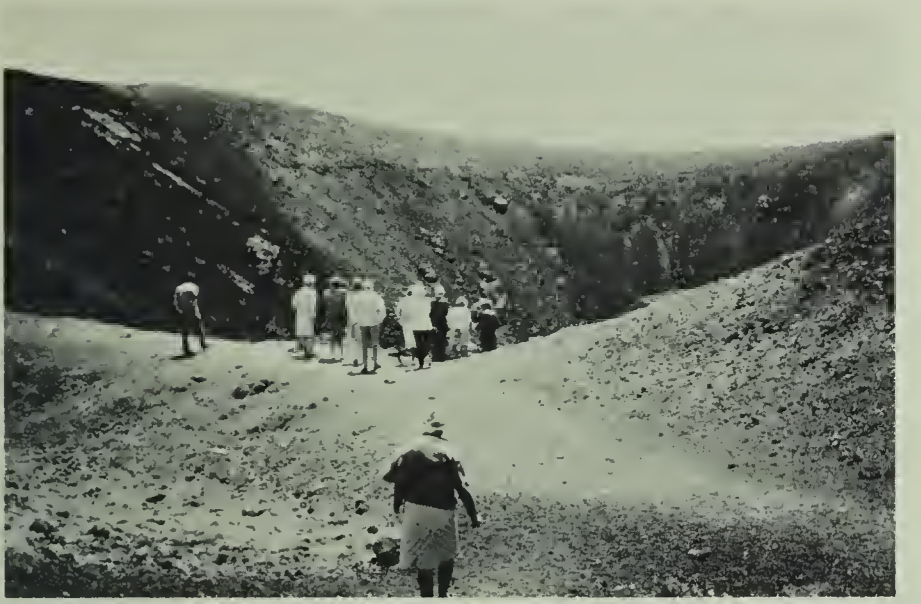

Fig. 6. Members of the tour on the upper slopes of Mt. Etna

through Arezzo. Many of the plants we had seen the day before were still with us, but several new ones put in an appearance. Among them were a rosy-purple-flowered gladiolus (*G. segetum*), the European black-fruited elder (*Sambucus nigra*) and the red dogwood (*Cornus sanguinea*), so called because of its bright red branches. We also began to see those shrubby yellow-flowered members of the Leguminosae which are known in English as "brooms". Although all of these are called "genista" by the Italians, they actually represent six different genera. The one we were seeing here was the Spanish broom, *Spartium junceum*. Later on our tour we were to encounter several of the others such as *Cytisus, Ononis* and *Calycotome*.

Florence has made a brave recovery from the disastrous flood of 1966, but everywhere throughout the city one can still see the high water mark on the sides of the buildings. It varies from six to as much as twelve feet or more, having been especially serious at Santa Croce because it is on lower ground than many of the other shrines.

On the afternoon of Tuesday, May 16, we paid a visit to the garden of the Botanical Institute of the University of Florence which embraces some six acres almost in the very center of the city. This is one of the oldest botanical gardens in Europe, having been established by Cosimo di Medici in 1545. (Fig. 3)

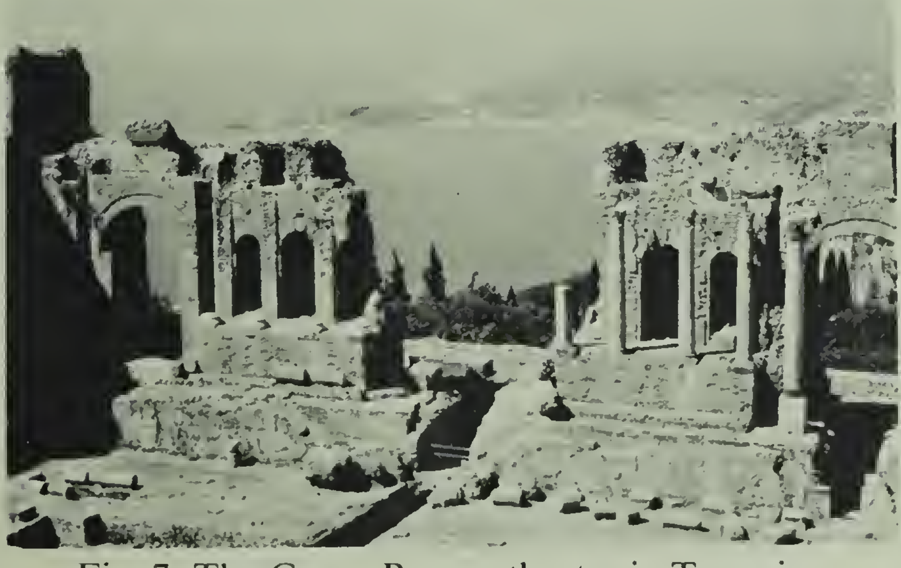

Fig. 7. The Greco-Roman theater in Taormina

We had received a cordial letter of welcome from the Director, Dr. Eleanora F. Corti, but until she was free to join our party we were shown around by Dr. Giovanna Ciuffi.

We were at once struck by the majestic size and age of many of the trees. An Irish yew (*Taxus baccata*), certainly one of the largest we had ever seen, had been planted, we were told, in 1705. A giant specimen of *Zelkova crenata* dates from 1820 and there were enormous trees of *Juglans mandshurica, Aesculus turbinata, Diospyrus Kaki, Podocarpus macrophylla* and many others. Among other items of interest were an excellent collection of cycads, a specimen of the rather rare *Feijoa Sellowiana* (a myrtaceous shrub from Brazil) and *Gymnosporia serrata* (a curious member of the Celastraceae which none of us had ever seen before).

The greenhouses were replete with a wealth of tropical material, especially rich in orchids, bromeliads and aroids. Again, as in the garden in Rome, there was a fine display of cacti and succulents.

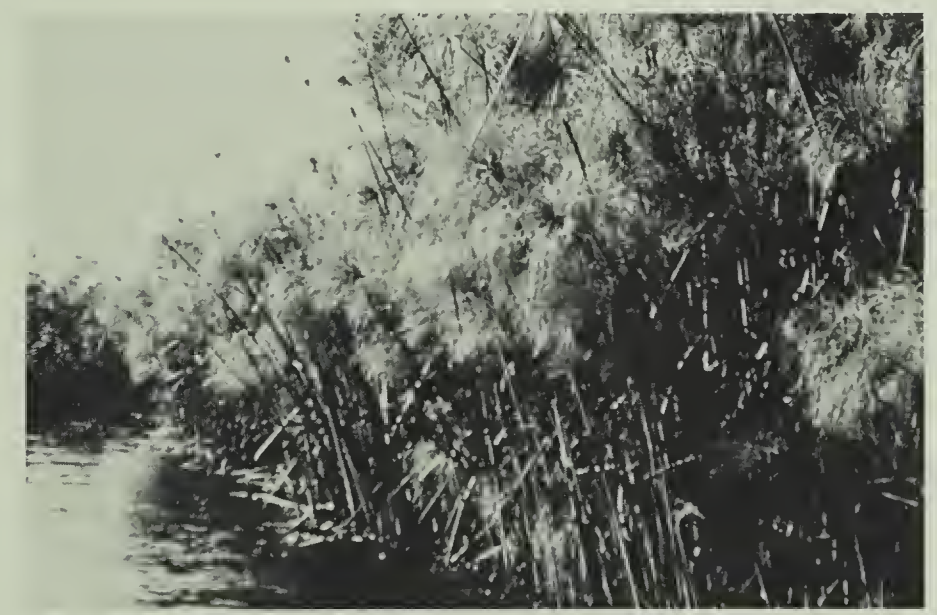

Fig. 8. Stand of papyrus along the Anapo River at Siracusa

The following afternoon we were privileged to visit Villa I Tatti, the home and garden of the late Bernard Berenson at Settignano. The garden is a magnificent formal affair laid out according to the accepted dictates of Italian design and the house is a museum filled with the treasures assembled by the distinguished author and critic who bequeathed it to Harvard University.

On the way back to Florence we stopped off in the charming town of Fiesole and enjoyed the view of the countryside across the ancient Roman theater.

It was our good fortune to be in Florence at a time when its annual flower market was in full swing. This was set up in the Loggia dei Lanzi and along both sides of the street in front of the Uffizi Gallery. (Fig. 4) Scores of nurseries were exhibiting their wares which ranged through cacti, conifers, deciduous and evergreen trees and shrubs and a broad assortment of annuals and perennials. A place of honor was occupied by *Medinilla magnifica*, that spectacular melastome from the Philippines.

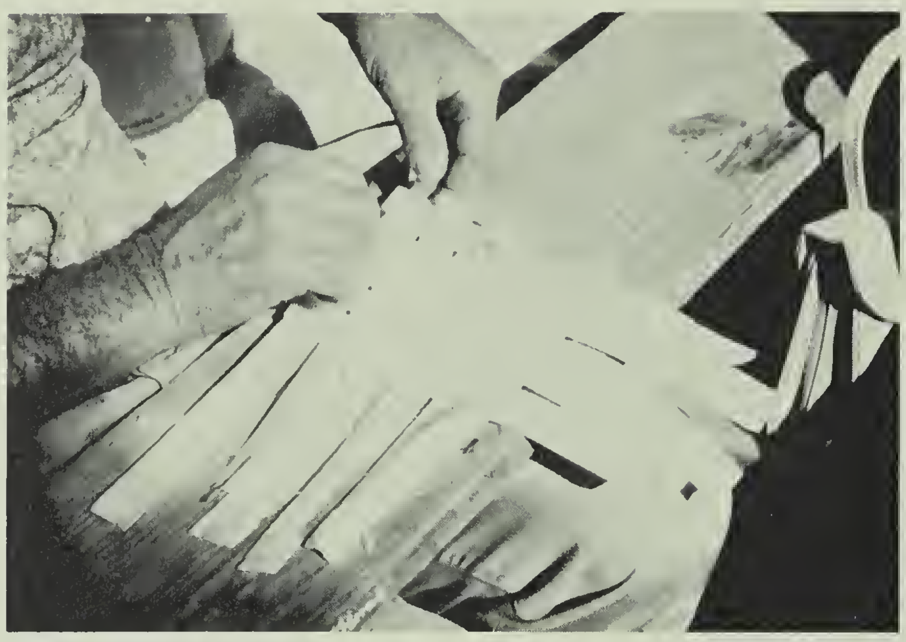

Fig. 9. Method of making papyrus

By virtue of a very early start on Thursday, May 18, we were able to make a brief stop at Pisa to see its famous monuments (the leaning tower, the duomo and the baptistery) before going on to the airport where we took the plane for Rome. In Rome we were joined by the second contingent which had left New York the night before, and all thirty-six of us then flew to Catania in Sicily. From Catania we drove north to Taormina, where we had reservations at the palatial Hotel San Domenico.

Not only does this hotel enjoy a superb location, affording majestic views of the undulating coastline, with Mt. Etna in the distance, it also possesses a garden of riotous color and almost infinite variety. (Fig. 5) In a brief stroll after breakfast the following day we listed sixty-five genera in flower. There is space for just a few of the more interesting:

*Bignonia Davidiana*. A handsome yellow-flowered climber.

*Phaedranthus buccinatorius*. A brilliant red-flowered trumpet vine, which we took at first to be a *Campsis*; the leaves, however, are bipinnate rather than odd-pinnately compound. It is a native of Mexico.

*Datura suaveolens*, the white-flowered angel's trumpet and the less familiar *D. coccinea*, with orange-red flowers.

*Cyphomandra betacea*. The tree tomato, which is often grown with us as a greenhouse subject.

*Leonitis Leonurus*. Lion's-ear, a brilliant orange-flowered labiate from Africa.

*Psidium guajava*. The guava, a small tree with brilliant, many-stamened flowers.

*Myrtillocactus geometrizans*. A striking candelabra cactus from Mexico.

Add to this *Bougainvillea* (in a variety of shades) and flame vine (*Pyrostegia*); such African composites as *Arctotis, Felicia* and *Gazania*; *Strelitzia* and *Agapanthus*; and a varied display of *Aquilegia, Schizanthus, Pelargonium, Cineraria, Abutilon, Antirrhinum, Nemesia* (to mention only a few) and perhaps some impression may be gained of the surpassing beauty and diversity of this garden.

Later that morning we undertook the ascent (by bus) of Mt. Etna, a volcano whose smoking summit rises nearly 11,000 feet above the sea. The lower slopes of Etna are covered with vineyards which seem to flourish on the black lava. Then we passed through forests of chestnut (*Castanea sativa*) and as we ascended higher we came to an area where very few plants were to be seen. One was the Spanish broom (*Spartium junceum*)—already mentioned as prevalent in parts of Italy. Another, to our surprise, was *Ephedra fragilis*, probably the variety *campylopoda*. The genus *Ephedra* (the source of the drug ephedrine) contains some forty species which occur in warm, dry habitats in North and South America and Eurasia. It belongs to a strange group of Gymnosperms, concerning whose origin very little is known.

As we achieved the 7000 foot level we found ourselves in a Dante-esque region of old lava flows—black, dark brown and dull red—molded into ridges and hollows with numerous cinder cones, denoting the sites of earlier eruptions. (Fig. 6) Of plants there was but a handful, and these mostly tufted clumps of grasses. Our hopes of getting to the summit of Mt. Etna by cable car were thwarted by unusually high winds which made this impossible.

Since for countless centuries Sicily has been a kind of political football at the toe of Italy's boot, a few words concerning its history may be in order. At least, they may help in interpreting the architectural diversity which is seen on all sides. Among the earliest inhabitants were the Sikelians, who gave the island its name. About 1000

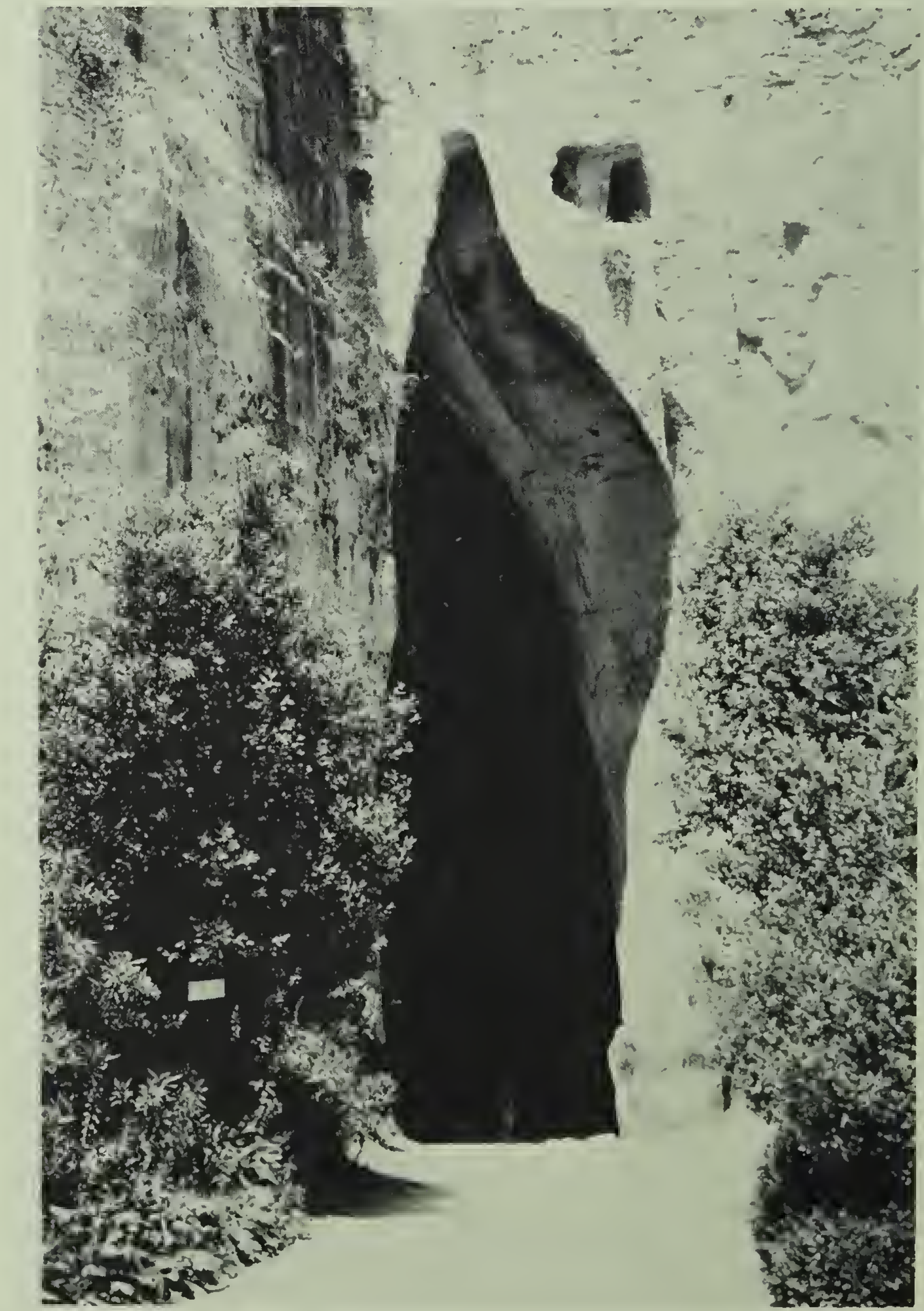

Fig. 10. The Ear of Dionysius

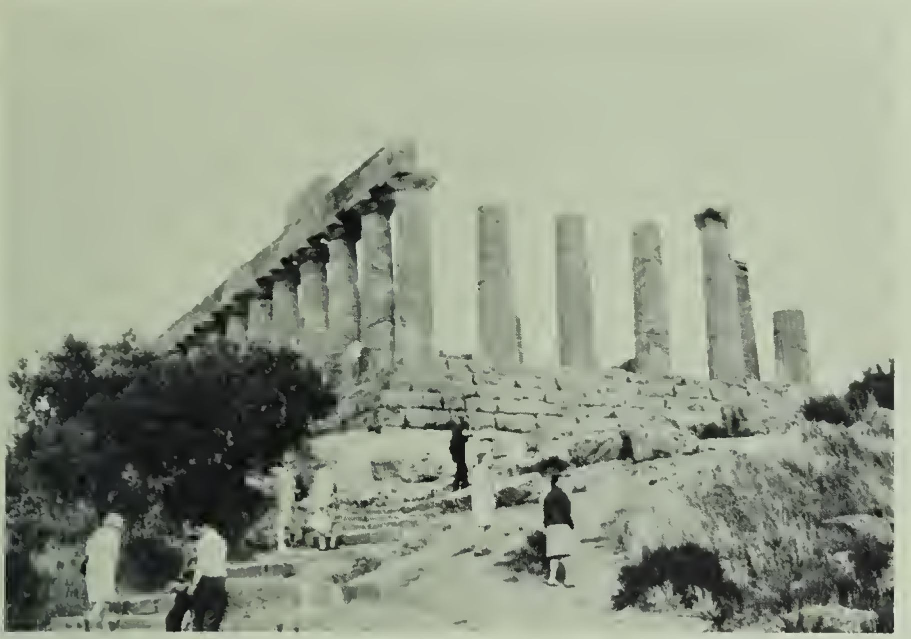

Fig. 11. The Temple of Juno at Agrigento

B.C. the Phoenicians came and stayed for two centuries. In 800 B.C. the Greeks conquered the island and remained for some five hundred years. Evidences of their civilization are to be seen in many places. The Greeks were followed by the Carthaginians who in turn were driven out by the Romans who ruled Sicily for five centuries. After the fall of Rome the Goths and Vandals plundered the island, following which it was under the domination of Constantinople for three hundred years. In 830 A.D. came the Mohammedan conquest and Sicily was under Saracen rule for two centuries. The Normans arrived in 1040 A.D. and remained for a century and a half, at which time they were succeeded by the Spanish Bourbons who misruled the island from the thirteenth to the nineteenth century. In May, 1860, Garibaldi ousted the tyrants and turned Sicily over to the Italian crown.

On the morning of Saturday, May 20, we visited the renowned Greco-Roman theater in Taormina. This edifice was built by the Greeks in the 4th century B.C. and later reconstructed by the Romans during their period of occupation of Sicily. Portions of the stage are well preserved (Fig. 7) and the seats which were carved out of the native rock are for the most part intact. With precipitous cliffs arising on the inland side, rugged shores curving away to the north and south, and Mt. Etna dominating it all, this simply must be considered as one of the most impressive views in the world.

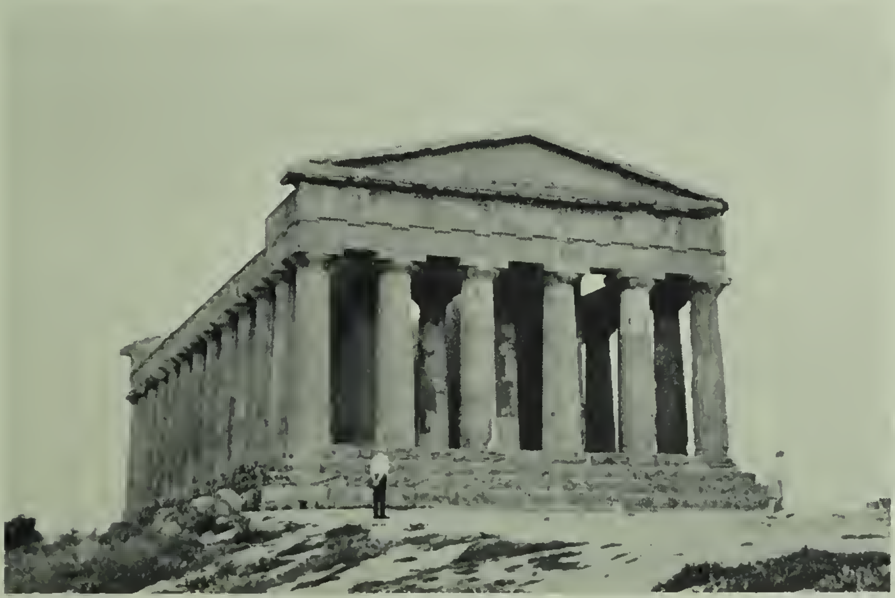

Fig. 12. The Temple of the Concordia at Agrigento

Later that morning we drove south past Catania, arriving at our hotel in Siracusa in time for lunch. In the afternoon our party, in three small boats, traveled up the Anapo River to see the famous stand of papyrus which had been introduced by the Arabs many years ago from Egypt (Fig. 8). This plant is a tall sedge, known botanically as *Cyperus Papyrus*, which was formerly common along the banks of the Nile and which at one time constituted the chief writing material or papyrus of the Egyptians. The captain of each of our craft demonstrated the manner in which this process was supposedly carried out. A few large stems (perhaps an inch in diameter) were collected and cut into sections about a foot long. The pith of these sections was then sliced into very thin strips which were next woven together to form a kind of mat. (Fig. 9) It is believed that the Egyptians placed these mats under water and beat the fibers together to form the substance on which they recorded so much of their history and civilization.

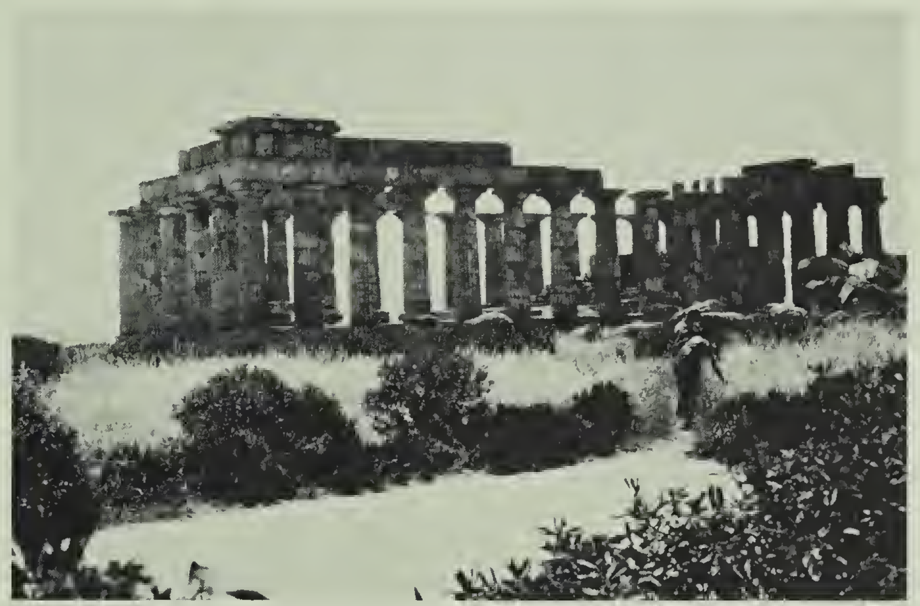

Fig. 13. The Temple of Juno at Selinunte

The following day, Sunday, May 21, was devoted to viewing the major archeological sites of Siracusa. We went first to see the Roman amphitheater, similar in design to but smaller than the Colosseum and less well preserved. Built during the reign of Augustus, this structure was largely carved out of the native rock. Not far from the amphitheater are the Latomie or quarries which furnished much of the stone used in the construction of the city. It was here that the several thousand Athenians were held as slaves. Here, also, is the famous Ear of Dionysius, a vast cave carved out of the rock, which possesses amazing acoustical properties. (Fig. 10)

We proceeded next to the Greek theater, whose fifty-nine rows of seats were hewn out of the limestone hillside. The location of this theater is superb, offering a commanding view of the harbor. Although almost nothing is left of the stage, it is still frequently used for classical performances. Indeed, when we were there in the forenoon scenery was being moved into place and when we passed that way later in the day the members of the cast were rehearsing for a production of "Medaea."

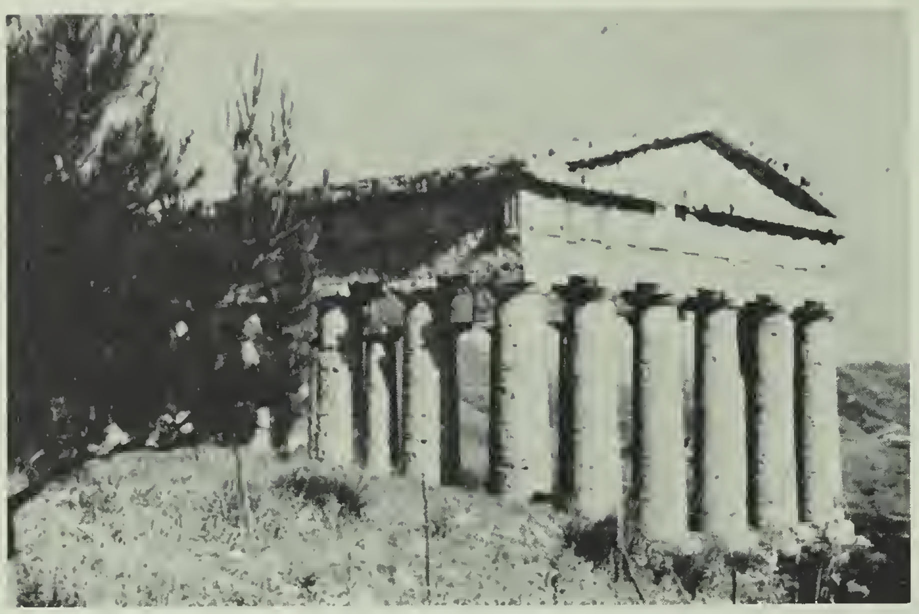

Fig. 14. The Temple at Segesta

The vegetation around all of these ruins was rather intriguing. One of the most conspicuous plants was the acanthus, the spiny leaves of which are supposed to have furnished the inspiration for the capital of the Corinthian column. Another plant was capers (*Capparis spinosa*) just coming into flower. The young flower buds of this species are pickled and used for culinary purposes. *Psoralea bituminosa* is a clover-like plant with heads of blue-violet flowers; its leaves when crushed emit an odor of pitch. The Boraginaceae is a large family of Mediterranean Europe and in the vicinity of Siracusa we made the acquaintance of such genera as *Lycopsis, Echium* and *Borago*, all of them with flowers at the bluish end of the spectrum. Clovers are another group well represented in this region and we saw here *Trifolium purpureum* and *T. stellatum*.

On May 22 we traveled from Siracusa to Agrigento by way of Piazza Armerina. It was on this leg of our journey that we first came into intimate contact with that remarkable type of vegetation known as "maquis." As defined by most plant ecologists, maquis, or macchie, is a natural plant community which results in areas of low rainfall from the clearing of the primeval evergreen forest. It is characterized by the presence of a few small trees, such as the strawberry tree (*Arbutus Unedo*), the Kermes oak (*Quercus coccifera*) and the tree heather (*Erica arborea*). Mostly, however, its components are low, usually evergreen and often prickly, shrubs. Among these are myrtle (*Myrtus communis*), Christ's thorn (*Paliurus spinacrista*), buckthorn (*Rhamnus alaternus*), butcher's broom (*Ruscus aculeatus*) and lentisc or mastic (*Pistacia Lentiscus*). Another large group are the rockroses. These belong to the genus *Cistus* and the one which we saw everywhere on this particular day was *C. monspeliensis*, a low shrub with small white flowers and very glutinous branches and leaves. Later in our travels we encountered three other species of this ubiquitous Mediterranean genus which to date we have been unsuccessful in attempting to grow outdoors at the arboretum.

In addition to these woody genera, there is a great wealth of herbaceous plants characteristic of the maquis. Such families as the Cruciferae, Leguminosae, Umbelliferae, Labiatae, and Compositae abound and it would require several pages merely to list the ones which we saw. Of greater interest perhaps in the fact that all of this combined to produce a multi-colored and mass effect seldom if ever seen in our Middle Atlantic states. It has been truly said that the Mediterranean is one vast flower garden and our appreciation of this statement continued throughout the rest of our stay in Sicily as well as in Sardinia and Corsica.

By mid-day we arrived at Piazza Armerina and spent an hour examining the amazing Roman mosaics in what is supposed to have been the villa of a very important person who flourished in the fourth century A.D. These mosaics, which have been discovered only within recent years, are now protected by overhead glass and one wanders along elevated walkways through more than forty rooms.

From Piazza Armerina we drove in a westerly direction across the island to the "Valley of the Temples". When my wife and I were here many years ago, this place was known as Girgenti. Today it is called Agrigento, derived from the old Greek Acragante, which took its name from the nearby river Acragas. Regardless of its name, this is the site of some of the most impressive Greek temples to be found anywhere in the world.

It was late in the afternoon when we caught our first glimpse of the Temple of Juno. Less well preserved than some of the others, this nevertheless is most imposing with its massive fluted columns, some topless, others, especially on the south side, retaining the entablature. (Fig. 11)

Not far away is the Temple of the Concordia, the best preserved of the entire group, in which the architrave is almost intact. (Fig. 12) We had remembered these and the other monuments here as of a rich cinnamon color and so they are, rather than the gleaming white of so many of the temples in Greece. The reason is that the building material used here is a soft brownish sandstone which upon inspection is seen to contain fossil shells.

The next morning we returned to the area, to view again the Temple of the Concordia and to see the temples of Jove, Hercules, and Castor and Pollux. Of the last-

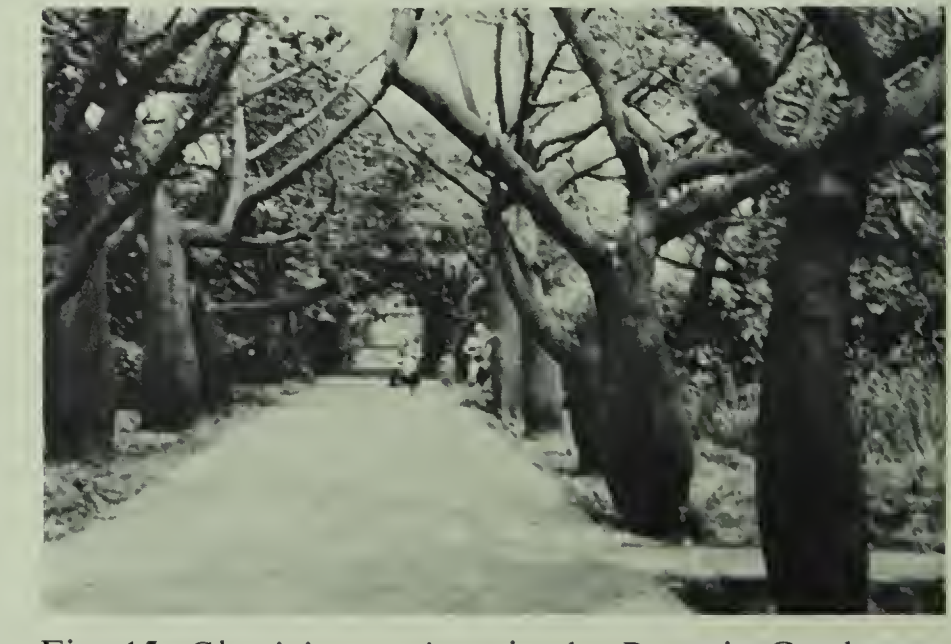

Fig. 15. *Chorisia speciosa* in the Botanic Garden at Palermo

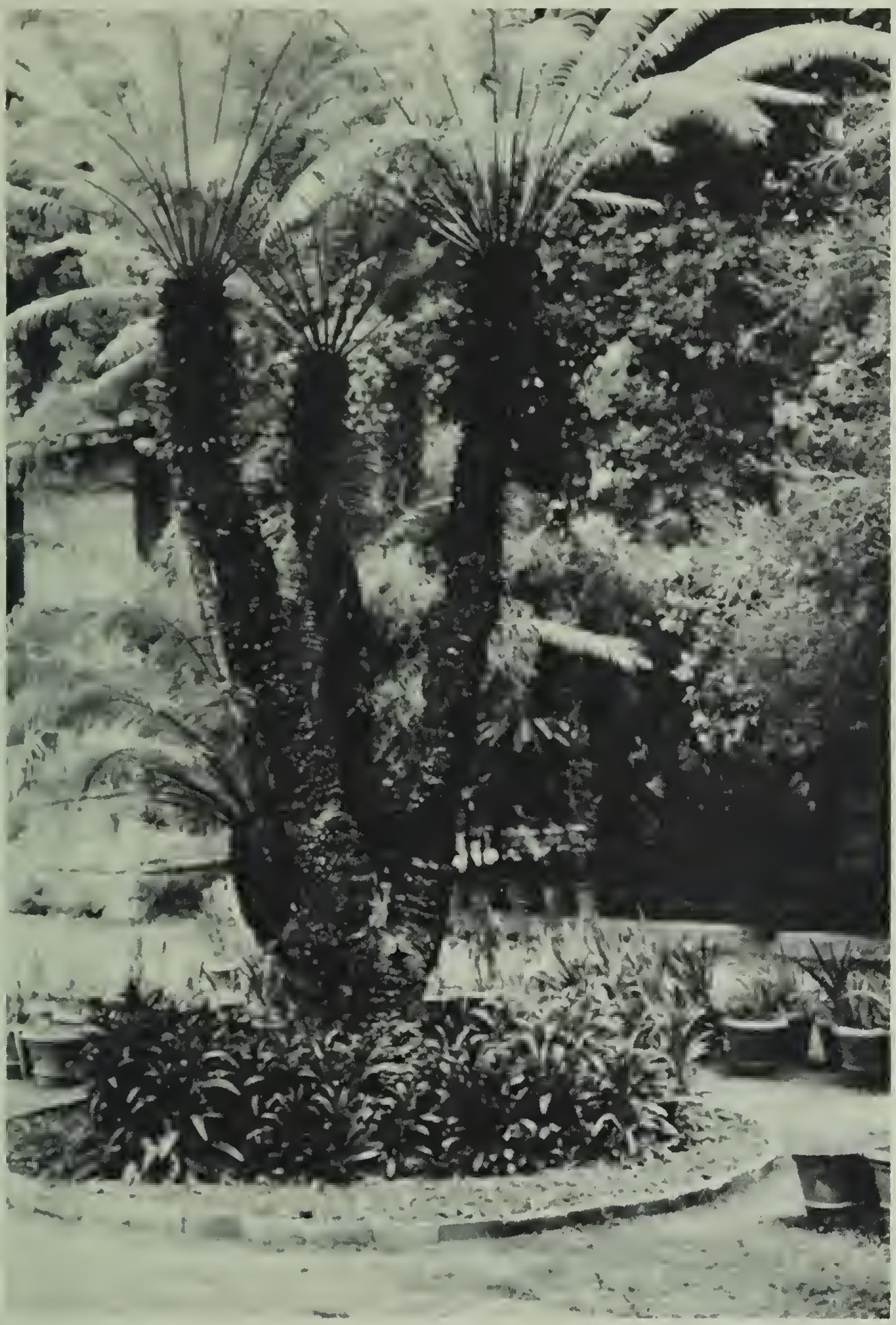

Fig. 16. *Cycas circinalis* in the Botanic Garden at Palermo

named only four columns and a small portion of the architrave remain. The vast amount of rubble lying on the ground around these temples attests to the havoc which earthquakes have wrought over centuries.

Here, as at Siracusa, wild flowers were in great abundance and a species we had not seen before was a thistly yellow-flowered composite which we identified as *Carthamus arborescens*. We had seen this plant around some of the temples in Greece on our 1968 tour and it seemed fitting that it should turn up here.

Our next objective was Selinunte, another glorious site overlooking the sea. The best preserved structure is the Temple of Juno. Here again the building material is a brownish sandstone and the effect is completely harmonious. (Fig. 13)

We were puzzled by a robust evergreen shrub which was common around the temples. Finally we discovered a branch with small lavender flowers which enabled us to proclaim it to be a *Myoporum*. Later we saw it growing in the garden at Palermo where it was labeled *M. serratum*. Although a native of Australia, it was here thoroughly naturalized.

The final stop of the day was at Segesta to see its massive temple, of which almost everything except the roof still exists. (Fig. 14) Unlike the other ones we had seen, this temple stands on a hilltop remote from the sea. Moreover, it is constructed of white limestone and its enormous columns are not fluted. Continuing on our way, we reached the thriving city of Palermo late in the afternoon.

The following morning (May 24) we paid a visit to the Orto Botanico of Palermo where, in the absence of Professor Andrea di Martino, we were received and shown around by Signor Amadeo Gaetano.

This garden, which was established in 1780, covers more than twenty acres and contains, counting the plants under glass, some 15,000 species and varieties. One greenhouse had a fine collection of cacti and succulents. Among the former category were beautiful specimens of *Mammillaria bicolor* and the golden-ball, *Echinicactus Grusonii*.

A striking feature of this garden is an avenue lined on both sides with *Chorisia speciosa*. This tree, which belongs to the Bombacaeae or Silk-cotton Family, has a swollen or bottle-shaped trunk which is densely covered with stout spines. (Fig. 15) Unfortunately, these plants were not in flower at the time of our visit. Some of us, however, had seen them in the Nairobi Arboretum in Kenya when they were covered with luscious pink blossoms.

When I first visited this garden in the early 1930's I was somewhat excited over a specimen of *Cycas circinalis* with three trunks. It was then about six feet tall and since branching at the base is rather uncommon in this group of plants I had never forgotten it. When I asked our guide whether it was still there, he replied in the affirmative and proudly took us to see it. Today it is about fifteen feet in height and while not too well situated for photographing we took its picture and hope that the accompanying illustration will convey some impression of its habit. (Fig. 16)

Plants from nearly all sub-tropical and warm temperate regions are cultivated in this garden. From Australia have come *Grevillea, Macadamia* and *Casuarina*. New Zealand is represented, among other things, by *Phormium tenax*, here in full flower. Africa has contributed the cabbage-tree, *Cyphostemma* (*Cissus*) *Juttae, Portulacaria afra* (a favorite food of elephants), *Agapanthus*

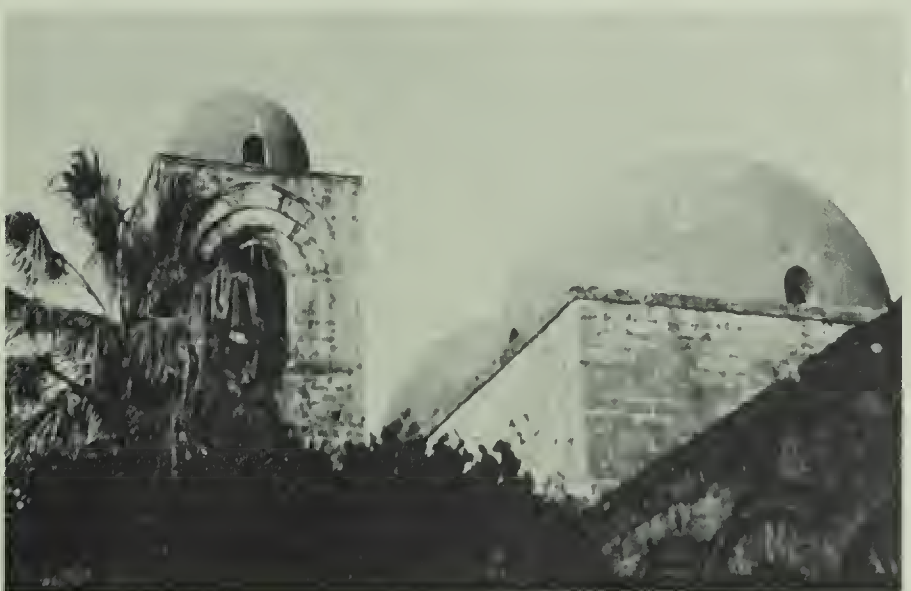

Fig. 17. Church of San Giovanni degli Eremiti in Palermo

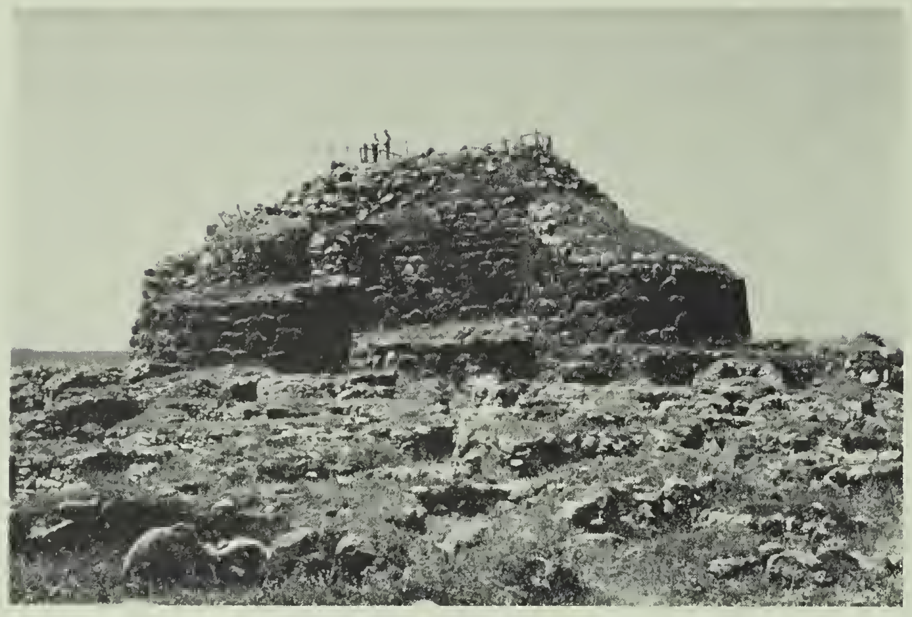

Fig. 18. Noraghic ruins at Barumini

*africanus* and several species of *Aloe*. The cardamom (*Eletteria Cardamomum*) is a native of India and Ceylon, although today most of it comes from Guatamala. *Tupidanthus* (of the Araliaceae) is indigenous to Malaysia. There was a huge specimen of *Yucca brasiliana* and a large plant of *Wigandia carcassana* from Central America. The latter, a member of the Hydrophyllaceae with large rough leaves and bright blue flowers, is familiar to everyone who has traveled through Mexico. The southeastern United States were represented by *Canella alba* and *Coccoloba laurifolia*. These few examples, selected at random, may give some idea of the richness of this collection.

That afternoon we visited the Cathedral, the Royal Palace with its marvelous Palatine Chapel, the Cathedral at Monreale and the picturesque old church and cloister of San Giovanni degli Eremiti. This last furnished another example of the manner in which previous occupations have left their imprint on Sicily—a Christian-Saracenic structure with a Norman campanile, a beautiful Romanesque cloister and several Moorish cupolas. (Fig. 17)

The following morning we flew from Palermo to Cagliari, a city located near the southern tip of the island of Sardinia. Some twenty miles south of Cagliari at Nora is Forte Village, which was to be our headquarters for the next two days.

As we drove south along the coast a salient feature of the vegetation was the tree mallow (*Lavatera arborea*). Although not truly a tree, this is a robust shrub producing an abundance of large rose-purple flowers. Another, but smaller, member of the same family, *Malva sylvestris*, was also much in evidence.

Our "hotel" at Nora was an aggregation of pleasant cottages deployed under an open stand of umbrella pine (*P. Pinea*). Each cottage had its own porch and garden and none was more than a short walk from the dining halls, the swimming pools and the very attractive beach. That afternoon we drove a few miles to inspect an extensive area of Punic-Roman ruins. Sardinia, like Sicily, has experienced the impact of many civilizations.

Since no activities were scheduled for the following day, some of us spent a couple of pleasant hours wandering around the spacious grounds and reveling in the wide diversity of plant material. Many of the species were native to the area; these included *Tamarix gallica, Arbutus Unedo, Erica arborea* and *Cupressus sempervirens*. Others, however, came from far-away places, e.g., *Pittosporum Tobira* (here in full flower, from China and Japan); *Mahonia lomariifolia* (from western China), a handsome species with sixteen to eighteen pairs of leaflets: *Lampranthus* and *Glottiphyllum* (two members of the Aizoaceae from Africa); *Gazania* (a brilliant African composite) and the ever-present century plant (*Agave americana*) from the southwestern United States. That evening we were treated to an exhibition of native dances.

On the morning of Saturday, May 27, we departed from Forte Village and drove first to Barumini, the site of some very curious Noraghic ruins, said to date from 1500 B.C. Little is known of these Noraghic people, whence they came or where they went, but they certainly knew how to fortify a hilltop and build a town at its base. (Fig. 18)

Once again, the vegetation around the ruins was of considerable interest. Here for the first time we saw *Bellardia trixago* (an attractive yellow-flowered member of the Scrophulariaceae) and *Lycopsis*, a purple-blue borage.

As we drove north from Barumini we found ourselves again in the maquis and among many of our old friends. One newcomer was a pink-flowered *Cistus*, which we identified as *C. villosus*. We made an excited stop to glory over our first asphodel (*Asphodelus albus*). Later it became so common that we paid little attention to it. At another place we paused to see a spectacular stand of *Pancratium illyricum*, with large pure white flowers. With it were two orchids (*O. collinia* and *O. mascula*) and a grape hyacinth (*Muscari comosum*). Another gladiolus (*G. communis*) was also present.

That evening we put in at a hotel in Nuoro for the night and the next morning continued in a northeasterly direction to the Club Hotel at Baia Sardinia, beautifully situated on the edge of the sea. It was on the approach to this locality that we first noticed in quantity the bay tree (*Laurus nobilis*) and saw fields of *Galactites tomentosa*, a purple-flowered composite. We also passed through an area of bizarre rock formations.

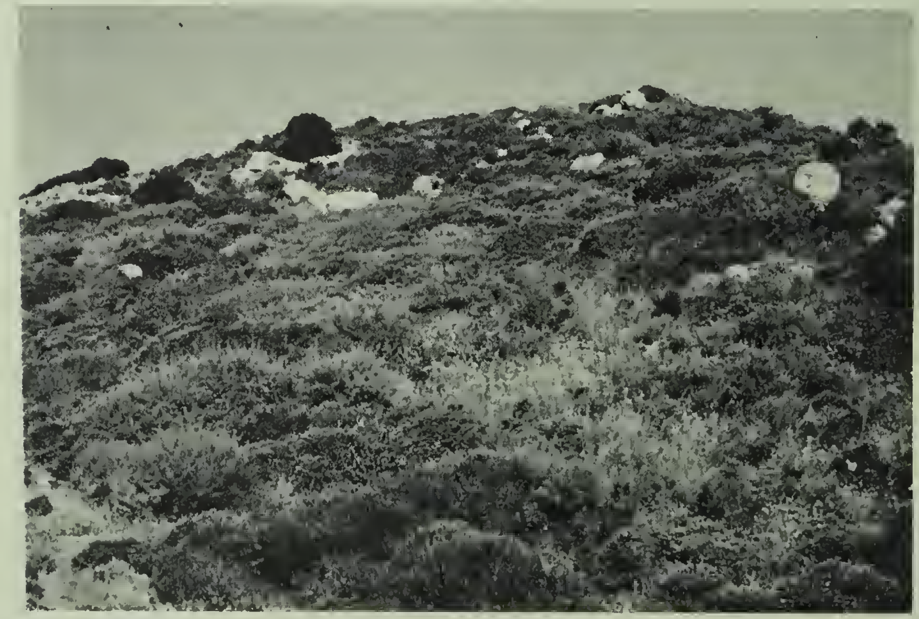

Fig. 19. Maquis on slope behind the Club Hotel at Baia Sardinia

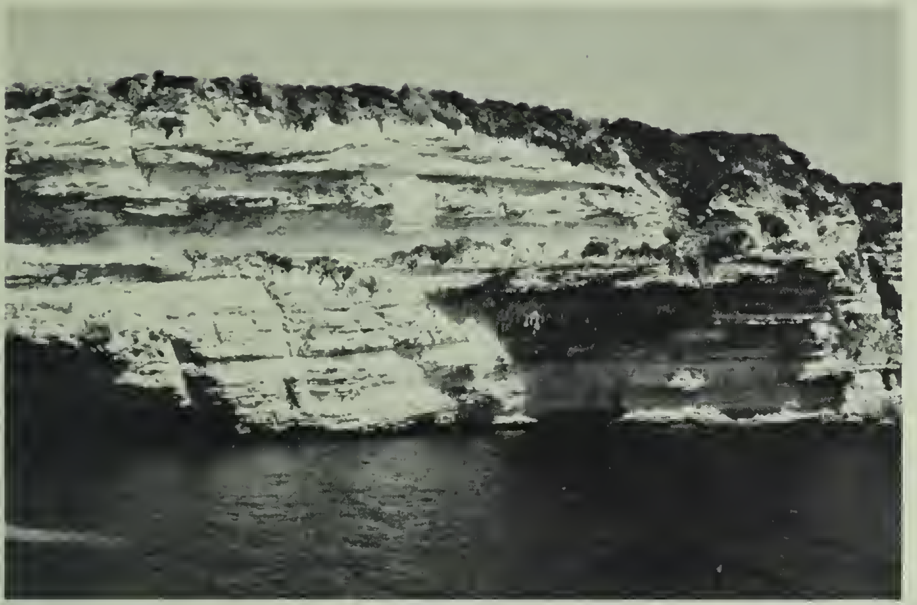

Fig. 20. Limestone cliffs at the entrance to the harbor of Bonifacio, Corsica

The steep slope behind our hotel was another perfect example of maquis vegetation. (Fig. 19) Practically all of the species we had seen before were here and, in addition, *Thymelaea hirsuta* (a member of the same family as our cultivated daphnes) and the terebinth (*Pistacia Terebinthus*).

A drive along the "Emerald Coast" the next morning took us to the photogenic harbor of Porto Cervo and included a visit to Stella di Mare, a gleaming white church which houses a picture by El Greco.

It was here at the Club Hotel that we bade farewell to our courier, Fernando Ponti, who had been with us ever since we left Rome. Fernando is a most unusual person. An art student for two years in Florence, widely traveled throughout Europe and America, well versed in history and literature, linguistically gifted and withal possesed of a superb sense of humor, he was the ideal person to accompany a group such as ours. I had only to exclaim: "Fernando, that purple flower over there!" and he was out of the bus in a flash, bringing back not only the purple flower but half a dozen other plants within reach. Much of the botanical enjoyment of our tour was due to him and we were sorry to have him leave us.

Departing from the Club Hotel the following morning, we drove to Santa Teresa Gallura, where we embarked on the steamer-ferry for Corsica, a voyage of little more than an hour.

The approach to the harbor of Bonifacio at the southern tip of Corsica is nothing short of spectacular. Pure white limestone cliffs, as beautifully stratified as depicted in any textbook, defined both sides of our sinuous passage until we finally emerged into the picturesque harbor of Corsica's busy southern port. (Fig. 20)

From Bonifacio we drove northward stopping at Sartene for lunch and arriving at the Hotel San Bastiano, a few miles north of Ajaccio in time for a late dinner.

In many respects Sardinia and Corsica are similar. Both possess undulating terrain and rugged coastlines. Both are largely agricultural and support many square miles of vineyards and fields of grain. But Corsica is perhaps the more spectacular of the two. It has range after range of permanently snow-capped mountains, vast forests of cork oak and bizarre rock formations which can scarcely be duplicated anywhere else on this planet.

Our Hotel San Bastiano was a sprawling one-story affair at the level of the sea, but with high mountains to the east, at our back. The grounds were richly planted with things as diversified as the bottle-brush tree (*Callistemon citrinum*) from Australia and the bull bay (*Magnolia grandiflora*) from the southeastern United States. There were several species of *Hebe* from New Zealand and a fine hedge of the yellow-flowered *Medicago arborea*, a native of the Mediterranean. The beach in front of our cottage was occupied by a solid stand of some kind of *Glottiphyllum* as far as the eye could see.

The following day was one of complete relaxation, so the "Horts" put it to good advantage by investigating the native as well as the exotic vegetation. The latter has been referred to above, but the indigenous flora was if anything more exciting. Again on the hills behind us maquis was dominant. A new rockrose (*Cistus salviaefolius*) was found here, white-flowered but without the glutinous foliage of *C. monspeliensis* which we had seen everywhere throughout Sicily and Sardinia. An attractive honeysuckle (*Lonicera etrusca*) was climbing over the strawberry tree and other shrubs and, to top it off, there was an intriguing reddish-brown-flowered orchid, *Serapias cordigera*.

The next morning we drove north to Cargese to inspect an old Greek church in front of which was a large tree of *Phytolacca dioica*, with an enormous swollen base. It is difficult to believe that this species belongs to the same genus as our poke-weed. As we continued our journey, a plant which we had seen from time to time (usually on walls) became dominant. This was the red valerian (*Centranthus ruber*), known also as Aaron's beard.

Our destination was Piana and long before we reached there the country changed from sparsely wooded to bare rocky outcrops. The culmination of this formation was a region of pink granite which the forces of nature have carved into fantastic peaks, towers and pinnacles, reminiscent of Bryce Canyon but with the blue sea in the background. (Fig. 21)

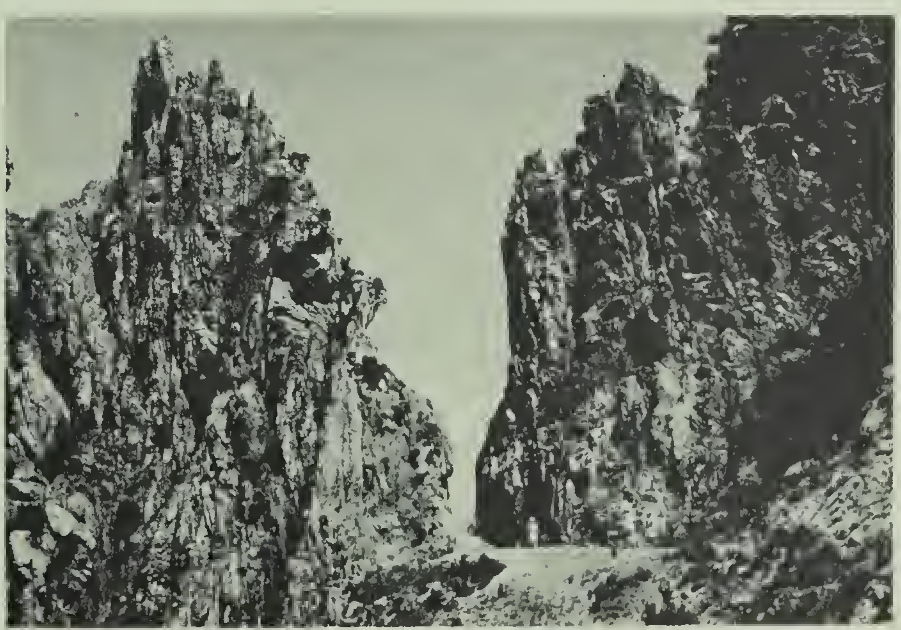

Fig. 21. Rock formations at Piana, Corsica

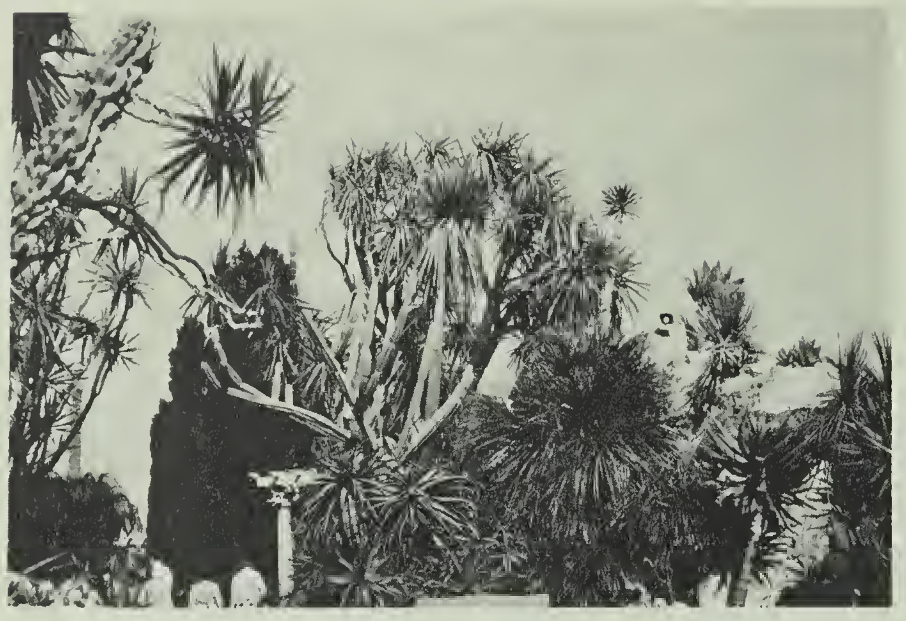

Fig. 22. View in the Jardin Exotique at Monaco

On Friday, June 2, we drove to Ajaccio, first to visit the birthplace of Napoleon, then to the airport whence six members of our party left for home, while the rest of us flew to Nice.

Our headquarters on the Côte d'Azur was in Monte Carlo, only a stone's throw away from the famous Casino. On the afternoon of Monday, June 5, our entire party was very graciously received at the Palace by Princess Grace of Monaco.

On the grounds of our hotel and in a nearby park were several unusual plants, of which there is space to mention just a few:

*Oplopanax nymphaeifolia*: a small umbrella-shaped tree, belonging to the Araliaceae, with large, ovate, drooping leaves.

*Oreopanax xalapense*: an upright tree with palmately lobed leaves—a native of Mexico, also a member of the Araliaceae.

*Metrosideros* (probably *robusta*): the "rata" of New Zealand; a large tree belonging to the Myrtaceae. Its feathery clusters of dark red flowers were just coming into bloom.

*Escallonia rubra*: a handsome shrub of the Saxifragaceae with bright red tubular flowers.

In addition there was a dragon tree, New Zealand flax and, of course, *Magnolia grandiflora*.

One of the great treats for the botanically-minded in Monaco is the Jardin Exotique. Carved out of steep limestone seacliff and accessibly by zig-zag descending walks, which have the virtue of bringing many plants into view at eye level, this garden contains an almost incredible display of mature cacti and succulents. Giant candelabra cacti from South America vie for a place with branching opuntias from Mexico and the American southwest. (Fig. 22) The genus *Aeonium* (Crassulaceae) was represented by some of the most luxuriant specimens we had ever seen and of the fascinating genus *Euphorbia* there was a wide selection of species, including some gigantic clumps of *E. resinfera*. Of the woody members of the Liliaceae there were *Yucca, Nolina* and *Aloe*, while the Amaryllidaceae contributed *Cordyline* and *Agave*.

Our four days of sightseeing in and around Monaco were largely non-horticultural and included visits to: the Picasso Museum at Cap d'Antibes, the Gorges du Loup (where we had a delicious three hour lunch), the ancient walled city of Vence, the picturesque hill-town of Eze, the Matisse Museum at Cimiez, the Picasso Chapel at Valauris, the Jean Cocteau Chapel at Villefranche, the Rothschild Museum at St. Jean-Cap-Ferrat, and the Maeght Foundation at Saint Paul.

There were, however, two notable experiences for the "Horts" during the last few days of our tour. One was a visit to the Jardin les Cèdres of M. Marnier-Lapostolle at St. Jean-Cap-Ferrat. We had met the owner of this garden in Mexico two years ago and he had issued a cordial invitation to us to pay him a visit. I, for one, have no hesitation in saying that his is the finest private garden I have ever seen. In an area of some thirty-five acres of undulating and partly wooded terrain are growing 14,000 species and varieties of plants, some outdoors and others in eleven greenhouses. The collection is extremely rich in cacti, succulents, bromeliads, aroids, palms and orchids. There are also many insectivorous plants. Unfortunately, a steady downpour discouraged photography, but we are grateful to Mr. Ladislaus Cutak of the Missouri Botanical Garden for the accompanying illustration. (Fig. 23)

The other garden we came upon quite by accident. We were headed toward the Cap d'Antibes and I happened, while glancing through our Michelin guide, to notice a reference to the Villa Thuret. The name Thuret at once recalled to my mind the French botanist who in 1853 had published a classic paper on sexual reproduction in *Fucus*, a brown marine alga or sea-weed. It seems that in 1856 Gustave Thuret had created this garden in order to acclimatize trees from warm countries. Apparently the first specimens of *Eucalyptus* from Australia were introduced here. The garden is now administered by the Ministry of Agriculture.

One thing that greatly impressed us in this collection was the immense size of many of the trees and the fact that they were spaced far enough apart to permit their

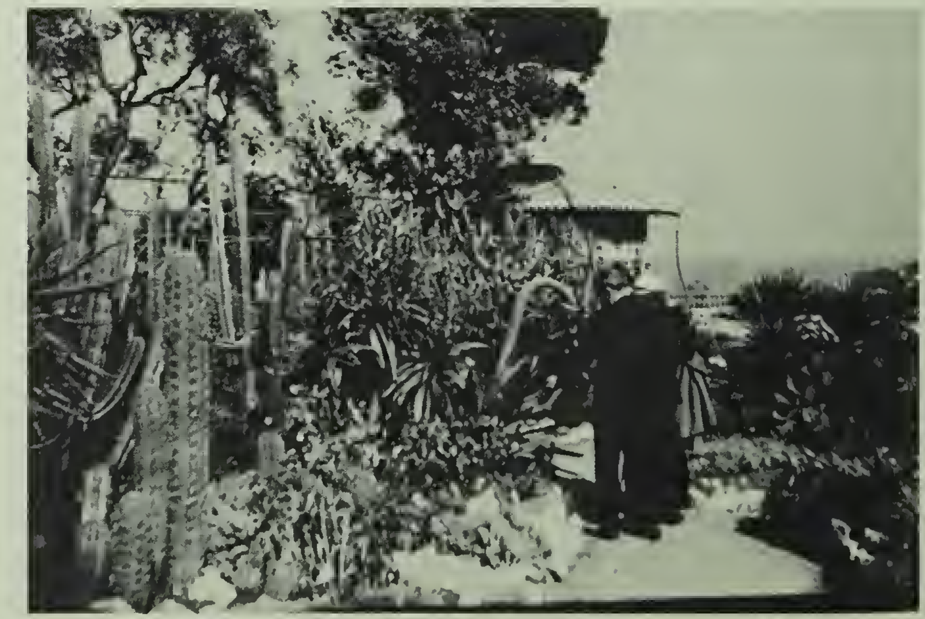

Fig. 23. View in the Jardin Les Cedres at St. Jean Cap-Ferrat. Photo by Ladislaus Cutak

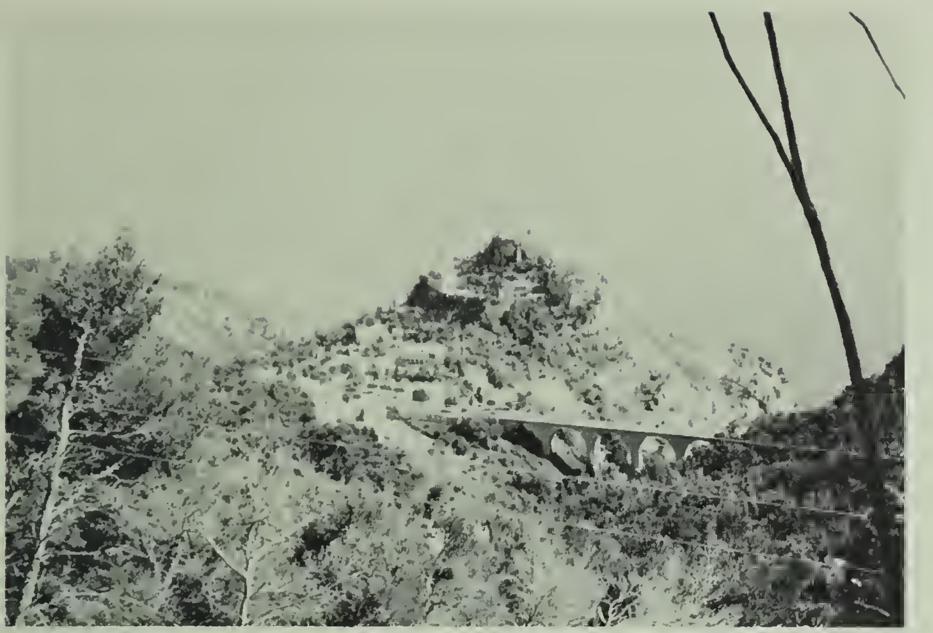

Fig. 24. Eze from the Grande Corniche

fullest development. This is doubtless because the garden contains some thirty-five acres.

Several of the specimens are eminently deserving of particular mention. Among the Gymnosperms there was a tree of that most elegant of all cypresses, *Cupressus cashmeriana*, unknown in the wild state, but said to be a native of Tibet. The finest example of this species in cultivation is on Isola Madre in Lake Maggiore. We had seen it there on our 1968 tour, and while the one here was smaller, it was just as graceful. There was also a good-sized tree of *C. glauca*, a close relative of *C. arizonica*. Another interesting conifer was *Araucaria angustifolia* (*brasiliana*), one of only two South American members of this genus, the other being the monkey-puzzle tree (*A. araucana*). This specimen bore several enormous cones at its very top.

We were delighted to see a fine plant of *Jubaea spectabilis* from Chile, a palm with a massive, gray trunk. We had seen this species also on Isola Madre in 1968.

Of the genus *Eucalyptus*, in which Thuret had apparently been greatly interested, there were, among others, *E. antipolitensis, E. viminalis* and *E. diversicolor*. The last-named we estimated to be close to one hundred feet tall.

Among other unusual plants were: *Acer oblongum* (a semi-evergreen maple from India and China with simple, unlobed leaves), *Banksia marginata* (an Australian protead), *Prunus ilicifolia* (an evergreen, spiny-leaved cherry from California) and *Abelia triflora* (a native of the Himalayas.) The last-named is said to be the hardiest of the abelias, but none of us had ever seen it in cultivation.

Altogether, this garden, which had not been on our original itinerary, seemed to provide a fitting climax to the botanical aspects of a tour on which we had seen such an amazing variety of interesting plants both in the wild and in cultivation.

On our final full day in this area of such inexhaustible diversity, some of us returned to Villefranche for lunch. On our way back to Monte Carlo we traveled by way of the lofty heights of the Grande Corniche. On this superb drive we had the Franch maquis for miles on our left and on our right a succession of elegant views of the blue Mediterranean far below. From one vantage point we could look down upon the hill-town of Eze, to the summit of which we had climbed a few days before, (Fig. 24) and from another we caught a glimpse of the ''Alpine Trophy'' at La Turbie, the monument erected by Caesar Augustus to celebrate the conquest of Gaul, a final reminder of the fact that this great inland sea has been a stage upon which many centuries of human history have been enacted.

# NOTES FROM THE ARBORETUM

## THE STAFF

It is with a profound sense of loss that we record the death, on March 28, 1972, of Dr. Conway Zirkle, Professor Emeritus of Botany at the University of Pennsylvania. Dr. Zirkle had been a member of the faculty of the Arboretum School for twenty years and in alternate sessions had taught Plant Inheritance and the History of Botany. His broad learning, warm personality and great sense of humor were an inspiration to all who had the opportunity of studying under him.

In addition to having contributed many articles on genetics and the history of botany to learned journals, Dr. Zirkle is the author of the following books: ''The Beginnings of Plant Hybridization,'' ''Evolution, Marxian Biology and the Social Scene'' and ''Death of a Science in Russia''. With M. J. Sirks he wrote ''The Evolution of Biology''.

We are fortunate in having obtained the services of Dr. Louis S. Marks, Chairman of the Department of Biology at St. Joseph's College, who will conduct Dr. Zirkle's classes.

From July 6 to 8 Dr. Marks attended a Symposium in Washington on Systematic Biology—The Development of a National Program on Resources and Resource management. Two highlights of the meeting were a discussion of national centers for the study of systematic biology and a program for the utilization of the computer as an aid in accessioning specimens and cataloging types.

We note also with regret the resignation of Dr. John C. Swartley, who had been teaching two of the courses in horticulture. His place will be filled by Angus P. Heeps of the Henry Foundation in Gladwyne, Pa.

On March 15 Dr. Gordon attended the Regional Ecology Conference and a group meeting sponsored jointly by the Departments of Biology and Geography at West Chester State College and on April 29 he led a "Field Trip for Everyone" to explore Pink Hill, a serpentine barren on the grounds of the Tyler Arboretum at Lima, Pa. On May 15 he joined a statewide committee of alumni of Ohio State University to formulate plans for the Barneby Center for Outdoor Education in the Clear Creek Valley of Hocking County.

From May 23 to 30 Dr. and Mrs. Gordon hiked through portions of the southern Appalachian Mountains and from June 18 to 21 they participated in a series of field trips in the vicinity of Plattsburgh, N.Y. Following this they joined the members of the Vermont Botanical and Bird Club on several field excursions centering about the Missisquoi National Wildlife Refuge near Lake Champlain.

Dr. Penny participated for the second year in Drexel University's interdisciplinary program "Mankind and Nature" given in the Department of Architecture. During the summer of 1972 he has been writing "The Natural History of Warrington Township" for distribution to schools and ecology groups.

On March 27 Dr. Fogg gave an illustrated lecture on "Unusual Trees and Shrubs" to the Phoenixville Garden Club and on April 10 he gave the same talk to the Penn Valley Garden Club.

# A MEMORIAL GARDEN

### EDGAR T. WHERRY

The reorganized American Horticulturist carries in Number 2 of Volume 51 an article entitled "A New Concept: The Commercial Botanical Garden," by Frederic Heutte. For several years I have been planning a similar project—on a mini-scale—and welcome an opportunity to discuss it here.

In the course of some 50 years of study of our lesser native plants from the ecological standpoint, I have occasionally come upon especially striking variants, and wished that these could be brought into horticulture before they were destroyed by the expansion of civilization. A promising plan was to bring them into a "Memorial Garden," where they could be increased by seeds, cuttings, etc., and distributed in plant-sales sponsored by various horticultural societies. A site for this would have to be found where there is a variety of suitable habitats, full protection against the vandalism which currently plagues Longwood Gardens, the Tyler Arboretum, etc., and a tradition favorable to sharing of plant-material with others. These requirements were fully met by the Barnes Arboretum, where Director John M. Fogg, Jr. welcomed the addition of the proposed garden.

For plants favoring a sunny situation a long narrow bed was dug southwest of the Art Gallery, and under the generous direction of Mr. John S. Kistler, President of the Delaware Valley Chapter of the American Rock Garden Society, filled in with rocks and soil. The source of the rock-slabs was especially appropriate: Many years ago as a young geologist I was employed as field assistant to Dr. Florence Bascom, head of the Geology Department at Bryn Mawr College, and she asked me to study the rock-ridge at Avondale, Chester County, to see if any evidence as to its geologic age could be found. The result was negative; but it was indeed pleasing to have rocks from that very spot brought in for my memorial garden.

As a stone-mulch or "scree" finely crushed argillite, which is chemically inert, covers the whole bed; the western end is made suitable for acid-soil plants by a supplementary mulch of conifer-needle-humus. To a small middle patch are added flakes of Devonian shale from Huntingdon County, Pa., to accomodate the "shale-barren-endemics." And at the east end, circumneutral reaction is obtained by adding limestone chips.

For plants favoring shady situations an area is available in the wooded south end of the Arboretum, the only preparation needed being the removal of previously established rampant ground-covers.

As to plant-material, the plan is to grow here species which, while they may be listed in botanical manuals, have been largely ignored by American horticulturists—the "neglected natives" as I have termed them in various writings. In particular, variants deemed sufficiently outstanding to merit cultivar names will be grown under these names and documented by pressed specimens in the Barnes Arboretum Herbarium.

Box-Huckleberry, *Gaylussacia brachycera* (Michx.) Gray. Since in collaboration with the late Dr. Frederick V. Coville I carried out considerable exploration for this species, it is represented here by three clones, kindly donated by Don Smith; adjacent to a low form of hemlock as a source of "needles": cv. 'Baird' from the patch discovered by Spencer F. Baird southwest of New Bloomfield, Perry Co. Pa.; cv. 'Parson Gray' from a colony found by Rev. Fred W. Gray in Greenbrier Co., W. Va.; and cv. 'Canby' from Millsboro, Delaware.